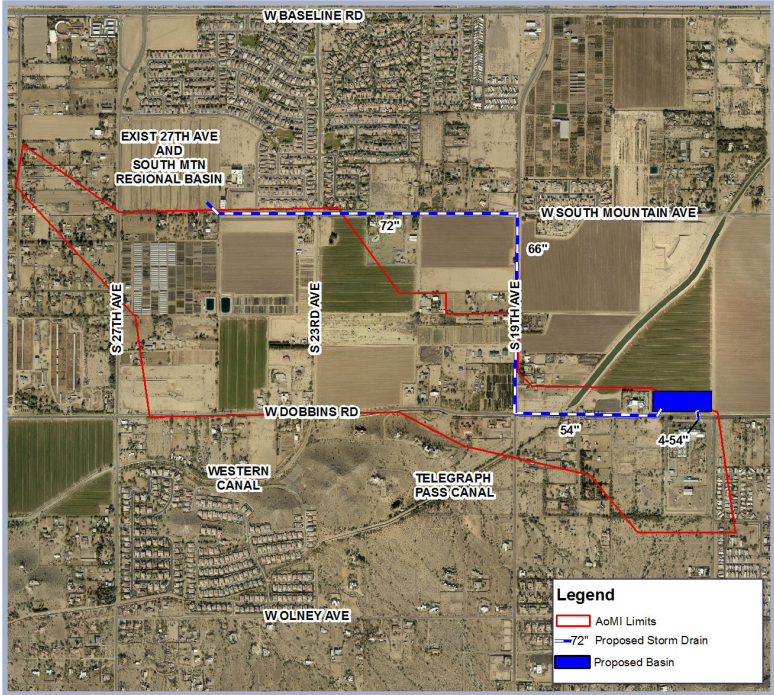


## 5. 19th Avenue and Dobbins Road

Most flooding in this area and the areas to the north and west is associated with very large flows that enter Dobbins from the south between 15th to about 19th Avenues. This combined flow floods Dobbins and adjacent improvements and ponds along the Western Canal. The combined flow passes through the narrow area along Dobbins near the Western Canal and continues west, flooding the intersection at 19th and other downstream areas.

### RECOMMENDED ALTERNATIVE

- Construct a regional detention basin on about 5.5 acres at the northeast corner of 15th Avenue and Dobbins, east of the existing Fire Station (pending COP Water Department approval), including a 4-barrel, 54-inch diameter basin inlet culvert under Dobbins to intercept flow from the existing Humane Society channel.
- Construct a storm drain in Dobbins from the new regional basin west to 19th, then north to South Mountain Avenue, then west to the existing 27th and South Mountain Avenues regional basin. The storm drain would range in size from 54-inch diameter along Dobbins Road to 72-inch diameter along South Mountain Avenue. In addition to draining the new detention basin, the storm drain would have large inlets along Dobbins and numerous smaller inlets along 19th and South Mountain Avenues.
- Estimated cost \$6.5 M



## Next Steps

The study team will complete the recommended plan report and present it to the Flood Control Advisory Board and Flood Control Board of Directors for endorsement. The District and City of Phoenix will work together to implement the drainage elements of the recommended plan as funding becomes available.

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# Laveen Area Drainage Master Study

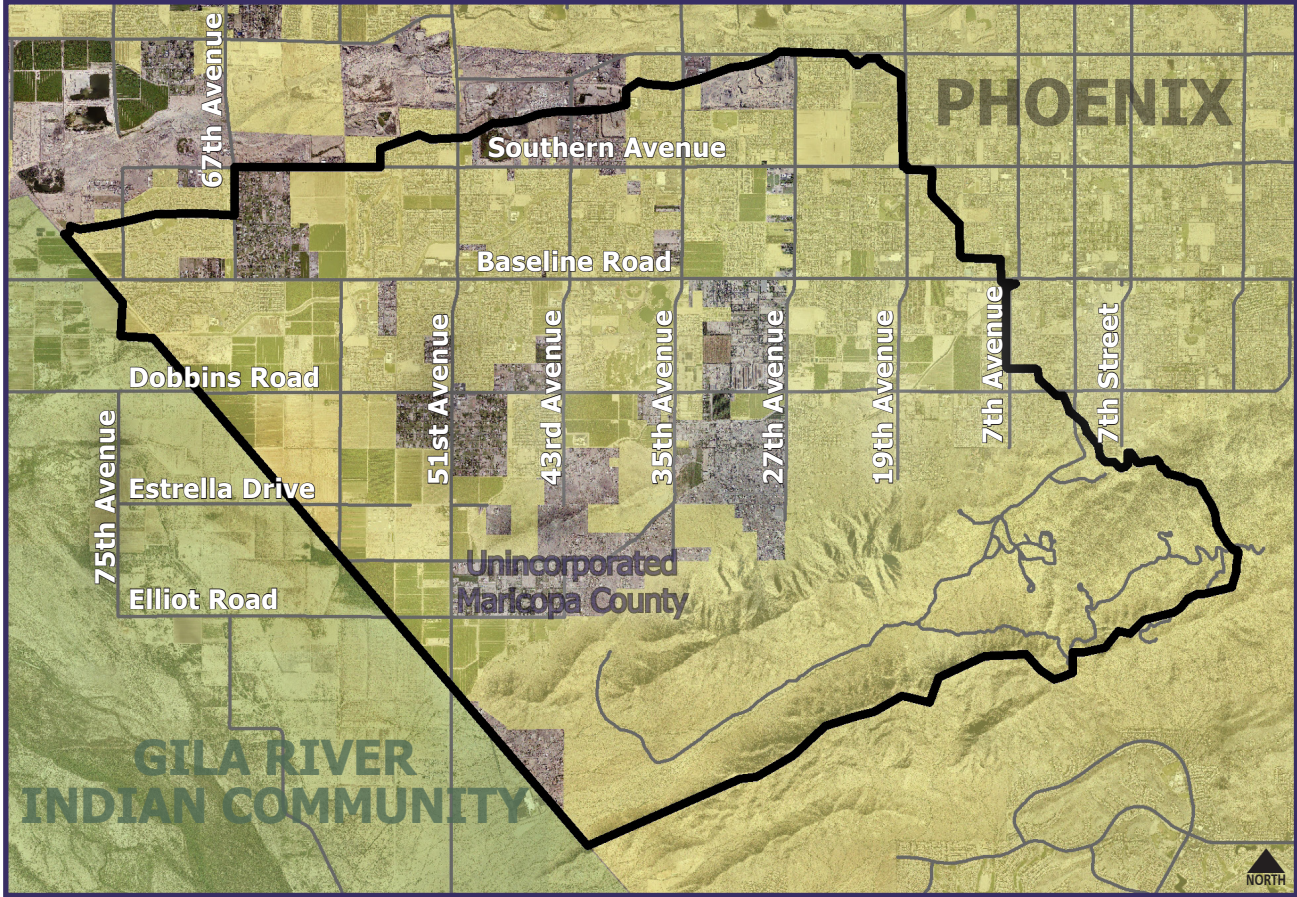
In late 2015, the Flood Control District (FCD) of Maricopa County, in partnership with the City of Phoenix, initiated a study to update the Laveen Area Drainage Master Plan for the South Phoenix/ Laveen area using new mapping and comprehensive flood model software. The updated study used data gathered from heavy rains and flooding that occurred in August and September of 2014.

The study included analysis of existing regional drainage improvements such as detention basins, channels, storm drains and culverts, much of which has been constructed based on recommendations from earlier versions of the regional drainage master plans. Construction efforts prior to this study focused mainly on the downstream portion of the overall recommended regional system to provide an outfall for future improvements closer to the foothills. This

study will recommend additional regional drainage facilities extending further up into the watershed to address neighborhood flooding issues that became more apparent during the 2014 storms.

The regional rainfall-runoff model completed now covers the entire study area. The new model identifies sources of stormwater flows so mitigation alternatives could be developed. Floodprone areas known as Areas of Mitigation Interest (AoMIs) were identified. A total of 11 potential mitigation alternatives were developed and presented at two public meetings held May 2017, at which time, comments were received from attendees. After further technical analysis of potential mitigation alternatives, the following components are proposed as the recommended drainage master plan for the study area.

Laveen Study Area



Map not to scale.

## Areas of Mitigation Interest

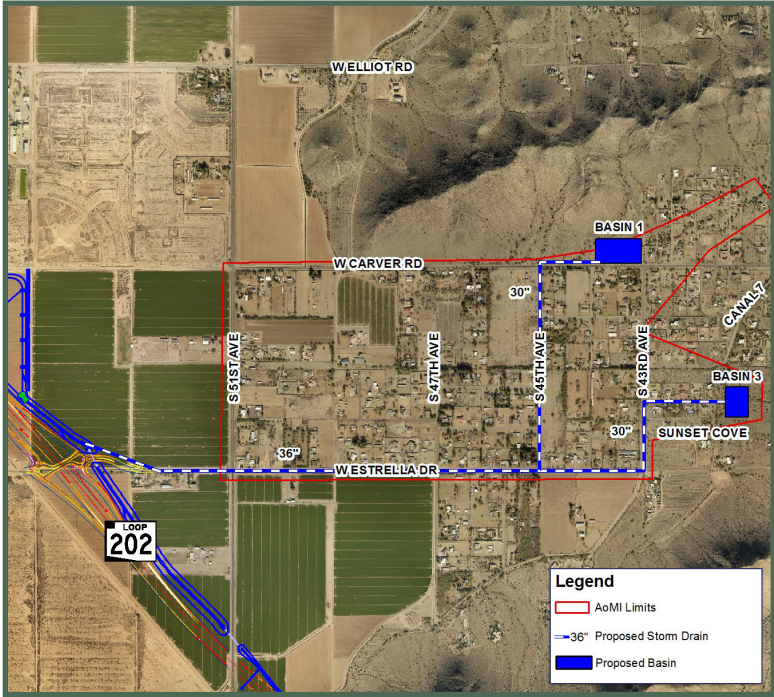
The drainage elements of the recommended master plan for each of the AOMIs are as follows:

### 1. Hidden Valley

Most of the flooding problems in Hidden Valley are the result of storm flows fanning out from two major washes that drain from areas east of 43rd Avenue. The flow from these washes combines west of 43rd and continues west.

#### RECOMMENDED ALTERNATIVE

- Construct two regional basins, one northwest of Carver Road and 43rd about 4.5 acres in size and, the other, east of 43rd near Sunset Cove about 5 acres in size.
- Construct storm drain along Estrella Drive which will drain the new regional basins west to outfall in the drainage system for the SR202 Freeway currently under construction. The storm drains range from 30 to 36 inches in diameter.
- Estimated cost \$7 M

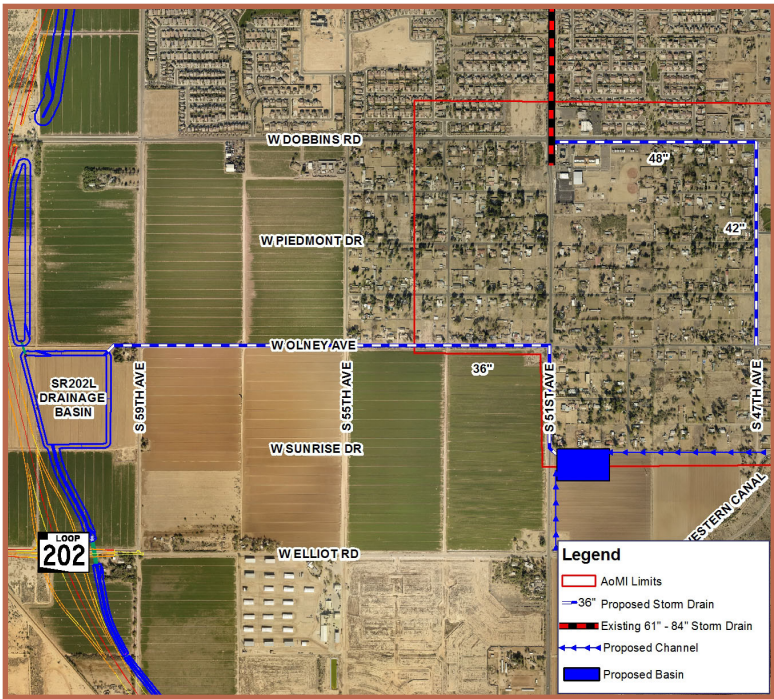


### 2. 51st Avenue and Sunrise Drive

Storm flows from the north face of Carver Mountain cause flooding in residential lots from Sunrise to Dobbins Road, east of 51st. This runoff has flooded numerous homes in the area north of Sunrise.

#### RECOMMENDED ALTERNATIVE

- Construct a new basin approximately 6 acres in size at the southeast corner of 51st and Sunrise with collector channels and a 36-inch diameter storm drain to discharge flow from the new basin to the offsite drainage system for the SR202 Freeway currently under construction.
- Add catch-basin inlets and laterals along 51st between the new basin and Olney Avenue.
- Construct a 42-inch diameter storm drain along 47th from Olney to Dobbins Road and a 48-inch diameter storm drain west in Dobbins from 47th to an existing 72-inch diameter storm drain in 51st, along with catch-basin inlets.
- Estimated cost \$6 M

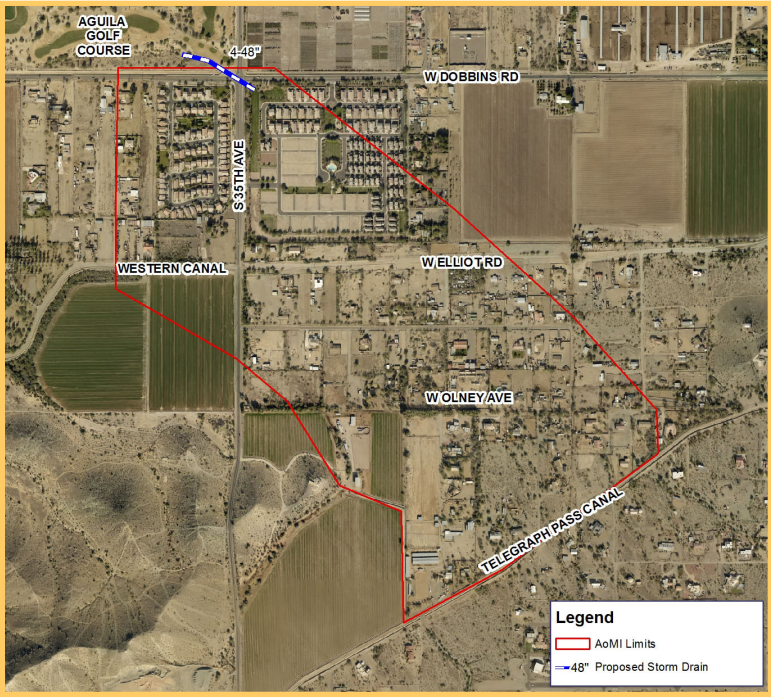


### 3. 35th Avenue and Dobbins Road

In this area, most of the flooding problems are the result of major washes that collect runoff from east of 35th, south of Dobbins. An existing regional-sized drainage channel in the residential subdivision southeast of Dobbins and 35th collects this flow but essentially ends at Dobbins causing flooding problems at the intersection.

#### RECOMMENDED ALTERNATIVE

- Construct a four-barrel, 48-inch diameter culvert under the intersection at Dobbins and 35th to drain flow from the existing subdivision channel into regional detention storage basins previously constructed in the Aguila Golf Course (pending COP Parks Department approval).
- Construct a storm drain with future Dobbins street widening project that would improve roadway and intersection drainage. Storm drain would also outfall to Aguila Golf Course.
- Estimated cost \$1 M



### 4. 27th Avenue and Olney Avenue

This area's greatest flooding problems are the major washes that impact Olney Avenue east of 27th and 23rd Avenues north of Olney, overwhelming the drainage infrastructure of existing subdivisions to the north and west. Flooding problems occur downstream from (north of) the subdivisions because there is no drainage infrastructure to carry stormwater to the recently constructed regional detention basin at 27th and South Mountain Avenues.

#### RECOMMENDED ALTERNATIVE

- Construct a 72-inch diameter storm drain in Olney from about 24th Drive west to 27th, then north to the existing 27th and South Mountain Avenue regional basin. This storm drain would have large inlets at multiple locations on Olney to intercept drainage as well as multiple inlets along 27th, including a large inlet for the subdivision retention basin just south of the Western Canal.
- Construct the proposed Hazard Mitigation Assistance (HMA) regional retention basins on about 4.5 acres along 23rd Avenue north of Olney
- Estimated cost \$6 M

